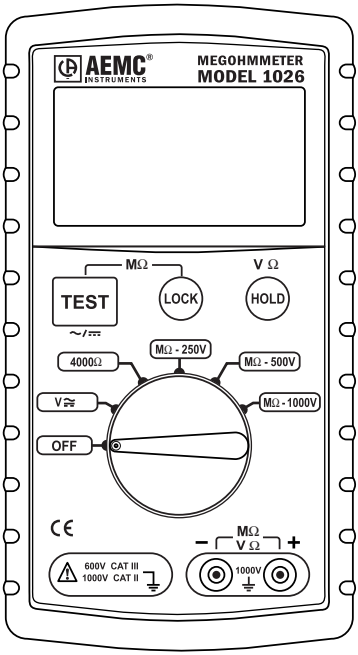
Digital/Analog Megohmmeter Model 1026

USER MANUAL



AEMC® INSTRUMENTS

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Statement of Compliance

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments certifies that this instrument has been calibrated using standards and instruments traceable to international standards.

We guarantee that at the time of shipping your instrument has met its published specifications.

An NIST traceable certificate may be requested at the time of purchase, or obtained by returning the instrument to our repair and calibration facility, for a nominal charge.

The recommended calibration interval for this instrument is 12 months and begins on the date of receipt by the customer. For recalibration, please use our calibration services. Refer to our repair and calibration section at **www.aemc.com.**

Serial #: _____

Catalog #: 2117.72

Model #: 1026

Please fill in the appropriate date as indicated:

Date Received: _____

Date Calibration Due: _____

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Limited Warranty

The Megohmmeter, Model 1026, is warranted to the owner for a period of 1 year from the date of original purchase against defects in manufacture. This limited warranty is given by AEMC® Instruments, not by the distributor from whom it was purchased. This warranty is void if the unit has been tampered with, abused or if the defect is related to service not performed by AEMC® Instruments.

Full warranty coverage and product registration is available on our website at www.aemc.com/warranty.html.

Please print the online Warranty Coverage Information for your records.

What AEMC® Instruments will do:
If a malfunction occurs within the one-year period, you may return the instrument to us for repair, provided we have your warranty registration information on file or a proof of purchase. AEMC® Instruments will, at its option, repair or replace the faulty material.

What You Must Do: First request a return authorization form by phone or by fax from AEMC® Instruments, then return the instrument along with the signed authorization repair form. Return material, postage pre-paid to:

Chauvin Arnoux®, Inc.,
d.b.a. AEMC® Instruments
Service Department
15 Faraday Drive
Dover, NH 03820 USA
Tel: (800) 945-2362 (X520)
(603) 749-6434 (X520)
Fax: (603) 742-2346

Caution: To protect against in-transit loss, we recommend you insure your returned material.

NOTE: You must obtain a CSA# before returning any instrument.

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⚠ Warning ⚠

These safety warnings are provided to ensure the safety of personnel and proper operation of the instrument.

- Read the following safety information carefully before attempting to operate or service the meter.
- Safety is the responsibility of the operator!
- Tests are to be carried out only on dead circuits! Check for live circuits before making resistance measurements.
- The megohmmeter is a source of high voltage, as is the sample connected to them. All persons performing or assisting in the tests must employ all safety precautions to prevent electrical shock to themselves and to others.
- AEMC® considers the use of rubber gloves to be an excellent safety practice even if the equipment is properly operated and correctly grounded.
- When testing capacitive samples, make sure that they have been properly discharged and that they are safe to touch.
- Electrical equipment and cables may have sufficient capacitance to store a dangerous charge from the instrument test current. For proper discharge to occur the push-to-measure button must be in the OFF position with the lock OFF and with the sample connected between the EARTH (+) and LINE (-) terminals.
- On prolonged tests, the TEST button may be locked ON. Care should be taken in this mode that no damage is done if the instrument is left unattended.
- Megohmmeters should never be used in an explosive environment.

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International Electrical Symbols

This symbol signifies that the probes are protected by double or reinforced insulation. Use only specified replacement parts when servicing the instrument.

This symbol signifies CAUTION! and requests that the user refer to the user manual before using the instrument.

Risk of electric shock. The voltage at the parts marked with this symbol may be dangerous.

Receiving Your Shipment

Upon receiving your shipment, make sure that the contents are consistent with the packing list. Notify your distributor of any missing items. If the equipment appears to be damaged, file a claim immediately with the carrier and notify your distributor at once, giving a detailed description of any damage.

Packaging

Your Megohmmeter, Model 1026, consists of the following items:

- Megohmmeter Model 1026
- Set of 8 AA batteries
- Set of leads with black and red alligator clips
- Soft carrying case
- User manual

Description

The AEMC® Model 1026 (Cat.# 2117.72) is a portable multi-range megohmmeter capable of measuring insulation resistance from 1kΩ to 4000MΩ. It has 3 test voltages of 250, 500 and 1000V.

In addition, the Model 1026 has an ohmmeter range to measure from 0.1Ω to 4000Ω with an audible tone for continuity measurement under 40Ω. A voltmeter (safety check) with a range from 0 to 600V AC or DC is available when turned on.

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General Specifications:

Display:
3" x 1.7" (76 x 42mm)
Big LCD panel with 40 segments analog bar indication.

Over Range Indication:
" -OL- " will be shown on the LCD Panel when out of range measurement is made.

Low Battery Indication:
The [+ −] will be shown when the batteries needs to be changed.

Sampling Rate:
2.5 times/sec digital display; 10 times/sec bar graph

Power Source:
(8) 1.5V AA size batteries

Battery Life:
1000V range @ 1 MΩ >10H
500V range @ 1 MΩ >20H
250V range @ 1 MΩ >30H

Operating Temperature and Humidity:
0° to 40°C (32° to 104°F), below 80% RH

Storage Temperature:
-10° to 60°C (14° to 140°F)

Dimension:
7.72" (L) × 4.41" (W) × 2.52" (H)
196mm (L) × 112mm (W) × 64mm (H)

Weight:
Approx. 700g (1.5 lbs) with batteries

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Electrical Specifications:

AC Voltage

Range	Resolution	Accuracy
600V	0.1V	± (1.5% rdg + 5 dgts)

DC Voltage

Range	Resolution	Accuracy
600V	0.1V	± (1% rdg + 3 dgts)

Ω Ohms (Autoranging)

Range	Resolution	Accuracy
400Ω	0.1Ω	± (1% rdg + 5 dgts)
4000Ω	1Ω	

•))) Continuity beeper

Range	Active	Protection
•)))	≤ 40Ω	600Vrms

MΩ (Autoranging)

Range	Resolution	Accuracy
4/40/400/4000MΩ (250V)	1kΩ	± (3%rdg + 5dgts < 2000MΩ) ± (5%rdg + 5dgts 2000MΩ to 4000MΩ)
4/40/400/4000MΩ (500V)		
4/40/400/4000MΩ (1000V)		

Voltage Output: -10% to +20% of selected range

Short Circuit Current: 250/500/100V: 2mA max

Safety Specifications:

CE

- IEC 1010, Cat. III, 600V, Pollution Degree 2
- Altitude up to 2000 meters (6000 ft.)
- Indoor use only
- EN50081-1; EN50082-1

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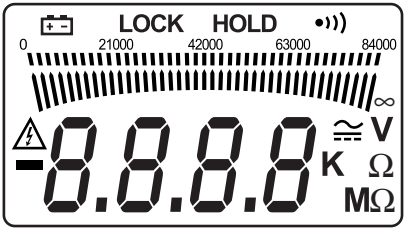
Ordering Information:

Megohmmeter Model 1026 ..... **Cat. #2117.72**

Accessories:

Replacement Test Leads with alligator clips ..... **Cat.# 2121.53**
Soft Carrying Case..... **Cat.# 2117.73**
Set of 5 fuses 0.5A 600V (fast blow) 1/2 x 3/8 ..... **Cat.# 2117.74**

Display Features:



	Low Battery
LOCK	High Voltage Output Lock Enable
HOLD	Data Hold
	Continuity Beeper Enable
	Analog Bargraph
	AC Input
	DC Input
	Polarity Indication
	Dangerous Voltage

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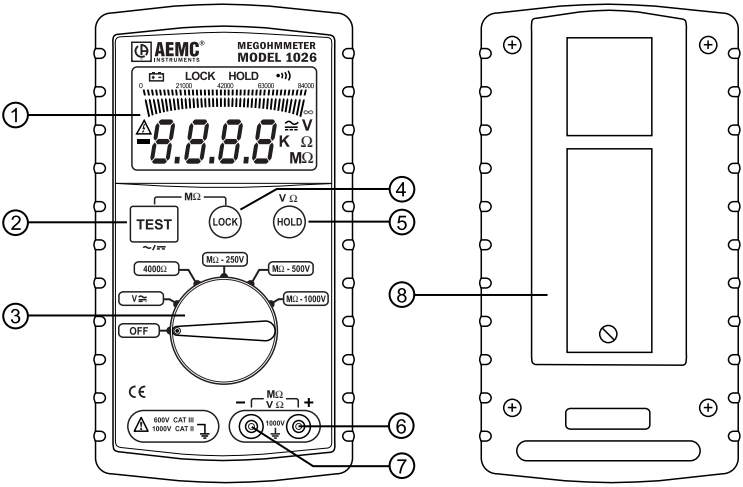
Model 1026 Features:



1. LCD Display
2. TEST Button
3. Function Selector
4. Power Lock Button
5. Data Hold Button
6. Hi Input Terminal
7. Lo Input Terminal
8. Battery Compartment Cover

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Functions

ACV Function:

Turn the function selector to the voltage range. Connect the black test lead to (–) terminal and the red one to the (+) terminal. Connect the test lead to the circuit in test. Reading can be held by pressing the HOLD key.

DCV Function:

Turn the function selector to the voltage range. Connect the black test lead to (–) terminal and the red one to the (+) terminal. Press the TEST button to change the mode from VAC to VDC function. Connect the test lead to the circuit in test. Reading can be held by pressing the HOLD key.

Low Ohm Function and Continuity Function:

Turn the function selector to the 4000Ω range. Connect the black test lead to (–) terminal and the red one to the (+) terminal. Connect the test lead to the circuit in test. If the reading is less than 40Ω, the continuity beeper will sound.

Because the test current provided by the meter could reach 200mA, do not use this range to test electronic components like diodes, transistors or fuses.

MegOhm Insulation Resistance Test Function:

Warning:

Do not test insulation on a live sample and make sure it is fully discharged before each test. The Model 1026 is equipped with VAC/DC function which may be used to check if the sample is live.

Turn the function selector to desired test voltage range. The LCD displays "----" to indicate the megohmmeter is standing by.

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Connect the black test lead to the (–) terminal and the red one to the (+) terminal. Typically, the (+) is connected to ground side of sample, if available, and if testing to reference to ground. Connect the test lead to sample. Measuring can be performed in manual power mode or power lock mode:

- **Manual Mode:** Press and hold the TEST button to activate the test voltage source until you obtain a stable reading. A periodic beeping will warn that there is high voltage output. Release the TEST button to stop test voltage output. A series of short beeps indicate that discharging is in progress. When the beeper stops, the discharge is completed. The test result will automatically be held on the display. Press the Hold key before making another test.
- **Lock Mode:** Press the LOCK button to enter the Power Lock operation mode. Press the TEST button once to activate the test voltage source. A periodic beeping will warn that there is high voltage output. The test voltage will continue to be applied until the TEST button is pressed again. Press the TEST button again to stop the test voltage output. A series of short beeps indicates that discharging is in progress. When the beeper stops, the discharge is completed. The test result will be held on the display automatically. If the test period extends longer than 3-minutes the test source will shut down automatically.
- **OVERLOAD:** When the measurement exceeds the range of the instrument " -OL- " is displayed.

⚠ **Warning:** Do not activate the test before the leads are properly connected to the sample under test.

Do not remove the test leads from the sample under test before the discharge process is completed.

Auto Power Off

When the tester is idle for thirty minutes with no function selector or button operation, it will turn itself off automatically. To turn the tester on again, turn the function selector to the "OFF" position, then to the selected function.

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Maintenance

Warning:

- For maintenance only use original factory replacement parts.
- To avoid electrical shock, do not attempt to perform any servicing unless you are qualified to do so.
- Do not perform any service while the megohmmeter is connected to any circuit.
- To avoid electrical shock and/or damage to the megohmmeter, do not let water or other foreign agents into the case.

Battery Changing

When [+ −] appears on the LCD, the batteries will need to be replaced. To replace the batteries, turn the function selector to the OFF position, disconnect the megohmmeter from any circuit, then open the battery compartment cover with a screwdriver. Eight AA 1.5V batteries are needed. After replacing the batteries, put the cover back on and tighten the screw.

Fuse Changing:

When connecting the meter under the Ω range to a source > 10V, the protection fuse will blow the circuit and a new one will be needed. To replace the fuse, turn the function selector to the OFF position, disconnect the megohmmeter from any circuit, disconnect the test leads, remove the back cover and replace the fuse (F 0.5A 600V).

Cleaning

The megohmmeter may be gently cleaned with a soft damp cloth, with soap. Dry immediately after cleaning. Do not submerge the case in water. Make sure the megohmmeter and all leads are perfectly dry before any further use.

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Repair and Calibration

To guarantee that your instrument complies with the factory specifications, we recommend that the megohmmeter be submitted to our factory service center at one-year intervals for recalibration, or as required by other standards.

For instrument repair and calibration:
Call (800) 945-2362 • (603) 749-6434, (X520) • Fax: (603) 742-2346

Chauvin Arnoux®, Inc.
d.b.a. AEMC® Instruments
Service Department
15 Faraday Drive
Dover NH 03820 USA

(Or contact your authorized distributor.) Costs for repair, standard calibration, and calibration traceable to N.I.S.T. are available.

Note: All customers must call for an authorization number before returning any instrument.

Technical and Sales Assistance

If you are experiencing any technical problems, or require any assistance with the proper use or application of this instrument, please call our technical hotline:

Chauvin Arnoux®, Inc.
d.b.a. AEMC® Instruments
Phone: (800) 343-1391
(508) 698-2115
Fax: (508) 698-2118
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